

WHAT IS CLAIMED IS:

1. A monitoring system for monitoring a predetermined location, comprising:

a first image display portion for storing in a storage unit image data, taken of different positions with a first camera unit capable of changing direction of taking images, with position information attached to each set of image data, and displaying either compressed images of said taken image data having been compressed or compressed images of said image data stored in said storage unit having been compressed, at a position based on corresponding position information, with position information of each of said taken image data sets being assembled therein; and

a second image display portion which, upon a first indicating display for indicating a predetermined range being superimposed on said first image display portion and a predetermined range being selected with said first indicating display, takes moving image data of said predetermined range selected with a second camera unit capable of changing direction of taking images, and displays said taken moving image data.

2. A monitoring system for monitoring a predetermined location, comprising:

first and second camera units which each have
an image-taking unit for taking pictures,
an image-taking direction changing unit for
enabling the direction of taking pictures with said image-
taking unit to be changed,

position information detecting means for detecting
positional information of image data taken with said image-
taking unit within the maximum movement range of said image-
taking direction changing unit, and

a storage unit for adding said detected position
information to said image data and storing said image data
with said position information attached thereto; and

a first image display portion for displaying either
compressed images of said image data taken by said first
camera unit having been compressed or compressed images of
said image data stored in said storage unit having been
compressed, at a position based on corresponding position
information, with position information of each of said taken
image data sets being assembled therein;

wherein, upon a first indicating display for indicating
a predetermined range being superimposed on said first image
display portion and a predetermined range being selected
with said first indicating display, said second camera unit
capable of changing direction of taking images takes moving
image data of said selected desired range, and a second

image display portion displays said taken moving image data.

3. A monitoring system according to Claim 1, wherein said first and second image display portions make display on mutually different areas on display means.

4. A monitoring system according to Claim 1, further comprising a third image display portion for storing in a storage unit image data, taken of different positions with said first camera unit over all image-taking directions in the maximum movement range thereof, with position information attached to each set of image data, and displaying either compressed images of said taken image data having been compressed or compressed images of said image data stored in said storage unit having been compressed, at a position based on corresponding position information, with position information of each of said taken image data sets being assembled therein;

wherein an image of a range indicated by a second indicating display superimposed on said third image display portion is displayed on said first image display portion.

5. A monitoring system according to Claim 4, wherein, while selection is being made with said first or second indicating displays, and during the time from selection with

said first or second indicating displays until starting of image-taking of said selected desired range, image data within said predetermined range selected with said first or second indicating displays is read out from said storage unit and displayed on said second or first image display portions.

6. A monitoring system according to Claim 4, wherein, upon an arbitrary point on said first or third image display portion being selected, said first or second indicating displays are superimposed on said first or third image display portion according to said selected arbitrary point.

7. A monitoring method for monitoring a predetermined location, comprising:

a step for storing in a storage unit image data, taken of different positions with a first camera unit capable of changing direction of taking images, with position information attached to each set of image data;

a step for displaying on a first image display portion, either compressed images of said taken image data having been compressed or compressed images of said image data stored in said storage unit having been compressed, at a position based on corresponding position information, with position information of each of said taken image data sets

being assembled therein;

a step for, upon a first indicating display for indicating a predetermined range being superimposed on said first image display portion and a predetermined range being selected with said first indicating display, taking moving image data of said predetermined range selected with a second camera unit capable of changing direction of taking images; and

and a step for a second image display portion displaying said taken moving image data.

8. A monitoring method for monitoring a predetermined location, using first and second camera units which each have

an image-taking unit for taking pictures,
an image-taking direction changing unit for enabling the direction of taking pictures with said image-taking unit to be changed,

position information detecting means for detecting positional information of image data taken with said image-taking unit within the maximum movement range of said image-taking direction changing unit, and

a storage unit for adding said detected position information to said image data and storing said image data with said position information attached thereto;

wherein either compressed images of said image data taken by said first camera unit having been compressed or compressed images of said image data stored in said storage unit having been compressed are displayed by a first image display portion at a position based on corresponding position information, with position information of each of said taken image data sets being assembled therein;

and wherein, upon a first indicating display for indicating a predetermined range being superimposed on said first image display portion and a predetermined range being selected with said first indicating display, said second camera unit capable of changing direction of taking images takes moving image data of said selected desired range, and a second image display portion displays said taken moving image data.

9. A monitoring method according to Claim 7, wherein said first and second image display portions make display on mutually different areas on display means.

10. A monitoring system according to Claim 7, further using a third image display portion for storing in a storage unit image data, taken of different positions with said first camera unit over all image-taking directions in the maximum movement range thereof, with position information

attached to each set of image data, and displaying either compressed images of said taken image data having been compressed or compressed images of said image data stored in said storage unit having been compressed, at a position based on corresponding position information, with position information of each of said taken image data sets being assembled therein;

wherein an image of a range indicated by a second indicating display superimposed on said third image display portion is displayed on said first image display portion.

11. A monitoring method according to Claim 10, wherein, while selection is being made with said first or second indicating displays, and during the time from selection with said first or second indicating displays until starting of image-taking of said selected desired range, image data within said predetermined range selected with said first or second indicating displays is read out from said storage unit and displayed on said second or first image display portions.

12. A monitoring method according to Claim 10, wherein, upon an arbitrary point on said first or third image display portion being selected, said first or second indicating displays are superimposed on said first or third image

display portion according to said selected arbitrary point.

13. A program for causing a computer to execute a monitoring method for monitoring a predetermined location, said method comprising:

code for a step for storing in a storage unit image data, taken of different positions with a first camera unit capable of changing direction of taking images, with position information attached to each set of image data;

code for a step for displaying on a first image display portion, either compressed images of said taken image data having been compressed or compressed images of said image data stored in said storage unit having been compressed, at a position based on corresponding position information, with position information of each of said taken image data sets being assembled therein;

code for a step for, upon a first indicating display for indicating a predetermined range being superimposed on said first image display portion and a predetermined range being selected with said first indicating display, taking moving image data of said predetermined range selected with a second camera unit capable of changing direction of taking images; and

code for a step for a second image display portion displaying said taken moving image data.

14. A program for causing a computer to execute a monitoring method for monitoring a predetermined location, said method using first and second camera units which each have

an image-taking unit for taking pictures,

an image-taking direction changing unit for enabling the direction of taking pictures with said image-taking unit to be changed,

position information detecting means for detecting positional information of image data taken with said image-taking unit within the maximum movement range of said image-taking direction changing unit, and

a storage unit for adding said detected position information to said image data and storing said image data with said position information attached thereto;

wherein either compressed images of said image data taken by said first camera unit having been compressed or compressed images of said image data stored in said storage unit having been compressed are displayed by a first image display portion at a position based on corresponding position information, with position information of each of said taken image data sets being assembled therein;

and wherein, upon a first indicating display for indicating a predetermined range being superimposed on said

first image display portion and a predetermined range being selected with said first indicating display, said second camera unit capable of changing direction of taking images takes moving image data of said selected desired range, and a second image display portion displays said taken moving image data.

15. A computer-readable recording medium storing a program for causing a computer to execute a monitoring method for monitoring a predetermined location, said method comprising:

code for a step for storing in a storage unit image data, taken of different positions with a first camera unit capable of changing direction of taking images, with position information attached to each set of image data;

code for a step for displaying on a first image display portion, either compressed images of said taken image data having been compressed or compressed images of said image data stored in said storage unit having been compressed, at a position based on corresponding position information, with position information of each of said taken image data sets being assembled therein;

code for a step for, upon a first indicating display for indicating a predetermined range being superimposed on said first image display portion and a predetermined range

being selected with said first indicating display, taking moving image data of said predetermined range selected with a second camera unit capable of changing direction of taking images; and

code for a step for a second image display portion displaying said taken moving image data.

16. A computer-readable recording medium storing a program for causing a computer to execute a monitoring method for monitoring a predetermined location, said method using first and second camera units which each have

an image-taking unit for taking pictures,

an image-taking direction changing unit for enabling the direction of taking pictures with said image-taking unit to be changed,

position information detecting means for detecting positional information of image data taken with said image-taking unit within the maximum movement range of said image-taking direction changing unit, and

a storage unit for adding said detected position information to said image data and storing said image data with said position information attached thereto;

wherein either compressed images of said image data taken by said first camera unit having been compressed or compressed images of said image data stored in said storage

unit having been compressed are displayed by a first image display portion at a position based on corresponding position information, with position information of each of said taken image data sets being assembled therein;

and wherein, upon a first indicating display for indicating a predetermined range being superimposed on said first image display portion and a predetermined range being selected with said first indicating display, said second camera unit capable of changing direction of taking images takes moving image data of said selected desired range, and a second image display portion displays said taken moving image data.

17. A monitoring system for monitoring a wide area, comprising:

a first image group for storing in a storage unit image data, taken of different positions with position information attached to each set of image data, and displaying either compressed images of said taken image data having been compressed or compressed images of said image data stored in said storage unit having been compressed, at a position based on corresponding position information, with position information of each of said taken image data sets being assembled therein;

a second image group which, upon a sighting line for

identifying a predetermined range being superimposed on said first image group and a predetermined range being selected with said sighting line, takes image data of said predetermined range selected of the positional information, and displays said taken image data at the corresponding portions; and

a display unit for displaying said first and said second image groups on mutually different regions.

18. A monitoring system for monitoring a wide area, comprising:

an image-taking unit for taking pictures;

an image-taking direction changing unit for enabling the direction of taking pictures with said image-taking unit to be changed;

position information detecting means for detecting positional information of image data taken with said image-taking unit within the maximum movement range of said image-taking direction changing unit;

a storage unit for adding said detected position information to said image data and storing said image data with said position information attached thereto; and

a display unit for displaying either compressed images of said taken image data having been compressed or compressed images of said image data stored in said storage

unit having been compressed, at a position based on corresponding position information, and displaying said first image group with position information of each of said taken image data sets being assembled therein;

wherein, upon a sighting line for indicating a predetermined range being superimposed on said first image group and a predetermined range being selected with said sighting line, the image taking direction of said image taking unit is changed based on positional information of said selected desired range, image data within said selected desired range is taken, and a second image group for displaying said taken image data at corresponding positions is displayed on a different region on said display unit from said first image group.

19. A monitoring system according to either Claim 17 or 18, wherein, while said desired range is being selected with said sighting line, and during the time from selection of said desired range with said sighting line until starting of image-taking of said desired range, image data within said desired range selected from said first image group with said sighting line is read out from said storage unit and displayed at a corresponding position on said second image group.

20. A monitoring system according to Claim 17, wherein, upon a desired point on said first image group being selected, said sighting line is superimposed on said first image group according to said selected desired point.

21. A monitoring method for monitoring a wide area, comprising:

a step for storing in a storage unit image data, taken of different positions with position information attached to each set of image data;

a step for displaying, either compressed images of said taken image data having been compressed or compressed images of said image data stored in said storage unit having been compressed, at a position based on corresponding position information, in a first image group, with position information of each of said taken image data sets being assembled therein;

a step for, upon a sighting line for identifying a predetermined range being superimposed on said first image group and a predetermined range being selected with said sighting line, taking image data of said selected desired range;

a step for displaying said taken image data at the corresponding portions in a second image group; and

a step for displaying said first and said second image

groups on mutually different regions of a display unit.

22. A monitoring method for monitoring a wide area, comprising:

- a step for taking pictures with an image-taking unit;
- a step for enabling the direction of taking pictures with said image-taking unit to be changed;
- a step for detecting positional information of image data taken with said image-taking unit within the maximum movement range of said image-taking direction changing unit;
- a step for adding said detected position information to said image data and storing said image data with said position information attached thereto in a storage unit; and
- a step for displaying either compressed images of said image data taken having been compressed or compressed images of said image data stored in said storage unit having been compressed, at a position based on corresponding position information, and displaying said first image group with position information of each of said taken image data sets being assembled therein;

wherein, upon a sighting line for indicating a predetermined range being superimposed on said first image group and a predetermined range being selected with said sighting line, the image taking direction of said image taking unit is changed based on positional information of

said selected desired range, image data within said selected desired range is taken, and a second image group for displaying said taken image data at corresponding positions is displayed on a different region on said display unit from said first image group.

23. A monitoring method according to Claim 21, wherein, while said desired range is being selected with said sighting line, and during the time from selection of said desired range with said sighting line until starting of image-taking of said desired range, image data within said desired range selected from said first image group with said sighting line is read out from said storage unit and displayed at a corresponding position on said second image group.

24. A monitoring method according to Claim 21, wherein, upon a desired point on said first image group being selected, said sighting line is superimposed on said first image group according to said selected desired point.

25. A program for causing a computer to execute a monitoring method for monitoring a wide area, said method comprising:

code for a step for storing in a storage unit image

data, taken of different positions with position information attached to each set of image data;

code for a step for displaying, either compressed images of said taken image data having been compressed or compressed images of said image data stored in said storage unit having been compressed, at a position based on corresponding position information, in a first image group, with position information of each of said taken image data sets being assembled therein;

code for a step for, upon a sighting line for identifying a predetermined range being superimposed on said first image group and a predetermined range being selected with said sighting line, taking image data of said selected desired range;

code for a step for displaying said taken moving image data at the corresponding portions in a second image group; and

code for a step for displaying said first and said second image groups on mutually different regions of a display unit.

26. A program for causing a computer to execute a monitoring method for monitoring a predetermined location, said method comprising:

code for a step for taking pictures with an image-

taking unit;

code for a step for enabling the direction of taking pictures with said image-taking unit to be changed;

code for a step for detecting positional information of image data taken with said image-taking unit within the maximum movement range of said image-taking direction changing unit;

code for a step for adding said detected position information to said image data and storing said image data with said position information attached thereto in a storage unit; and

code for a step for displaying either compressed images of said image data taken by said first camera unit having been compressed or compressed images of said image data stored in said storage unit having been compressed, at a position based on corresponding position information, and displaying said first image group with position information of each of said taken image data sets being assembled therein;

wherein, upon a sighting line for indicating a predetermined range being superimposed on said first image group and a predetermined range being selected with said sighting line, the image taking direction of said image taking unit is changed based on positional information of said selected desired range, image data within said selected

desired range is taken, and a second image group for displaying said taken image data at corresponding positions is displayed on a different region on said display unit from said first image group.

27. A computer-readable recording medium storing a program for causing a computer to execute a monitoring method for monitoring a wide area, said method comprising:

code for a step for storing in a storage unit image data, taken of different positions with position information attached to each set of image data;

code for a step for displaying, either compressed images of said taken image data having been compressed or compressed images of said image data stored in said storage unit having been compressed, at a position based on corresponding position information, in a first image group, with position information of each of said taken image data sets being assembled therein;

code for a step for, upon a sighting line for identifying a predetermined range being superimposed on said first image group and a predetermined range being selected with said sighting line, taking moving image data of said predetermined range selected with a second camera unit capable of changing direction of taking images;

code for a step for displaying said taken moving image

data at the corresponding portions in a second image group;
and

code for a step for displaying said first and said second image groups on mutually different regions of a display unit.

28. A computer-readable recording medium storing a program for causing a computer to execute a monitoring method for monitoring a predetermined location, said method comprising:

code for a step for taking pictures with an image-taking unit;

code for a step for enabling the direction of taking pictures with said image-taking unit to be changed;

code for a step for detecting positional information of image data taken with said image-taking unit within the maximum movement range of said image-taking direction changing unit;

code for a step for adding said detected position information to said image data and storing said image data with said position information attached thereto in a storage unit; and

code for a step for displaying either compressed images of said image data taken by said first camera unit having been compressed or compressed images of said image data

stored in said storage unit having been compressed, at a position based on corresponding position information, and displaying said first image group with position information of each of said taken image data sets being assembled therein;

wherein, upon a sighting line for indicating a predetermined range being superimposed on said first image group and a predetermined range being selected with said sighting line, the image taking direction of said image taking unit is changed based on positional information of said selected desired range, image data within said selected desired range is taken, and a second image group for displaying said taken image data at corresponding positions is displayed on a different region on said display unit from said first image group.

29. A monitoring system for monitoring predetermined locations, comprising:

storage means for storing image data, taken of different positions with a first camera unit, with position information attached to each set of image data;

a display unit for displaying either compressed images of said taken image data having been compressed or compressed images of said image data stored in said storage unit having been compressed, at a predetermined position

corresponding to each image set of image data, thereby displaying an entire image; and

indicating display means for indicating a predetermined range of an entire image on said display;

wherein a second camera unit is shifted to said position based on the position information of image data corresponding to the range in the indicating display, and consecutively taking images of the location corresponding to the position indicated with said second camera unit.

30. A monitoring system according to Claim 29, wherein said first camera unit shifts the direction of taking images in order to create said entire image, while said second camera is shifted to said position based on the position information corresponding to the range in said indicating display.